

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TENNESSEE
GREENEVILLE DIVISION

ULTIMA SERVICES CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	No. 2:20-cv-00041-DCLC-CRW
)	
U.S. DEPARTMENT OF AGRICULTURE,)	
et al.,)	
)	
Defendants.)	

**DEFENDANTS' MEMORANDUM OF LAW
IN OPPOSITION TO PLAINTIFF'S MOTION TO EXCLUDE
TESTIMONY OF DEFENDANTS' EXPERT DANIEL CHOW**

Defendants United States Department of Agriculture ("USDA"), the Secretary of Agriculture, the United States Small Business Administration ("SBA"), and the Administrator of the United States Small Business Administration ("Defendants"), by their attorneys, submit this memorandum of law in opposition to Plaintiff's Motion to Exclude the Testimony of Defendants' Expert Daniel Chow ("Chow Report"). Plaintiff's motion should be denied because it fails to identify any shortcomings with Mr. Chow's report that constitute proper reasons to exclude it pursuant to Fed. R. Civ. P. 26(a)(2)(B) or Fed. R. Evid. 702.

Plaintiff contends that the Chow Report is deficient under Federal Rule of Civil Procedure 26(a)(2)(B) because it purportedly fails to include a complete statement of all opinions and the basis and reasons for them, as well as all the facts and data Mr. Chow considered in forming them. This contention lacks merit as demonstrated by the clear explanatory language in the Chow Report and the data and information submitted to the Plaintiff during expert discovery. Plaintiff's argument appears to rest on the fact that Defendants did not produce intermediate data set iterations

that were generated during Mr. Chow's analysis or provide a detailed description of how every data set iteration was generated in his written report. Nothing in Rule 26(a) mandates such a detailed accounting, and Plaintiff's attempt to read such a requirement into the Rules of Civil Procedure would prove intractable.

Plaintiff also seeks to exclude Mr. Chow's testimony under Federal Rule of Evidence 702, based on its contention that the methodology in the Chow Report is unreliable because it does not include bidding data for federal contractors and does not disaggregate the results by individual racial groups. These critiques not only lack merit on their face, but they fail to implicate the admissibility of Mr. Chow's report or testimony.

RELEVANT FACTUAL BACKGROUND

I. Chow Report

On February 7, 2022, Defendants produced an expert report prepared by Daniel Chow, a senior economist with the U.S. Department of Commerce's Minority Business Development Agency ("MBDA"), entitled "Update to the Assessment of Contracting Outcomes for Small Disadvantaged Businesses." *See* Ex. 1, ("Chow Rpt."). As Mr. Chow explains in the introduction, the purpose of the report was to:

review data on government contracting to assess the relationship between contracting outcomes for small businesses and the type of ownership of the businesses. This study focuses on federal contracting and the probability of certain classifiable businesses' attainment of federal contracts in a specific period, including minority-owned businesses and small disadvantaged businesses (including businesses that participate in the Small Business Administration's Section 8(a) business development program).

Id. at 1. The report explicitly detailed the method Mr. Chow used to extract probabilities from the raw data. In order to compute the probability of being awarded a federal contract, the Chow Report compared the list of small businesses registered to do business with the federal government to the

list of contract awards by the federal government for a period of seventeen months, between April 2019 and August 2020:

Data provided by the SBA originated from the System for Award Management (SAM) for registered companies containing firm-level information such as size, employment, location, dates of operation, industry, and Dunn and Bradstreet data universal numbering system (DUNS) numbers. SBA also provided two datasets from the Federal Procurement Data System (FPDS) for contract awards: one each for small businesses and for non-small businesses. Both the small and non-small business files contain information about business type, organizational type, ownership, dollars awarded, SDB status, and DUNS numbers. The data for registrants and awards were extracted for firms registered in SAM, or that had recorded transactions, from April 2019 to August 2020. From the original raw datasets, I compiled a list of relevant variables from both SAM registrants' data (7,466,447 observations and 42 variables) and FPDS awards (5,104,224 observations and 55 variables).

Id. at 3. Using these two sets of data (SAM and FPDS), Mr. Chow was able to match firms in each data set and determine which firms were awarded federal government contracts, and conversely, those that were not. *Id.* at 2. From these two data sets, Mr. Chow was able to isolate firms that had similar characteristics (like size, organization, business type, and security clearance) and compare their chances of winning a federal government contract, produced as odds ratios. *Id.* at 2-3. This process of generating the odds ratios by isolating variables with comparable features is performed with a regression analysis. *Id.* at 6. The data sets used by Mr. Chow also included the specific industries these firms operated in—as designated by the North American Industry Classification System (“NAICS”)—and this information was used to further determine the odds of winning a contract in specific industries. *Id.* at 3. In order to compute these odds, Mr. Chow used the Stata¹ statistical software program, although any number of statistical software programs could have been used to perform the exact same analysis. *Id.* at 6 n.11; Ex. 2, July 5, 2022 Declaration of Daniel

¹ Stata is a commonly used statistical software package developed by StataCorp for data analysis, manipulation, visualization, and statistics. *See* Ex. 2, July 5, 2022 Declaration of Daniel Chow (“2nd Chow Decl.”) ¶ 3.

Chow (“2nd Chow Decl.”) ¶ 4 . The Chow Report was modeled after a 2012 study by Dr. Robert Rubinovitz (which was also completed on Stata), a copy of which was attached as an exhibit when the report was produced to Plaintiff. Chow Rpt. at 1. Mr. Chow followed Dr. Rubinovitz’s methodology to the maximum extent possible. *Id.* at 3.

As explained in the Chow Report, in order to perform this regression analysis using Stata, Mr. Chow chose to use the logit model of regression analysis:

A logit model of regression estimates the relationship between a variable to be explained (the “dependent” variable) and one or more explanatory variables (the “independent” variables). The resulting estimated relationship between the dependent and independent variables is called the odds ratio, which is expressed by the general logit model: $Y = \exp(\beta * X + \varepsilon)$. As expressed in this model, Y is the dependent variable; X is one or more independent variable(s) that might explain Y ; β is the unknown parameter(s) to be estimated (which measures the degree to which the independent variable(s) is related to the dependent variable); ε is the error term (which represents statistical “noise” of other elements that influence the dependent variable); and $\exp(.)$ is the exponential function. The model was run to obtain estimated odds ratios for winning contract awards in various industries and for a number of different variables.

Id. at 2.

While the dependent variable here was whether or not a firm won a contract, the independent variables were:

the ownership of the firm (minority-owned, women-owned, and veteran-owned); the type of organization (whether the firm is a corporation, a partnership, or some other type); other firm characteristics (size, in terms of numbers of employees and revenues, level of security clearance of the firm, and firm age); and whether the firm identifies itself as a [socially disadvantaged business] and if so, whether the firm is part of the SBA’s 8(a) program.

Id. at 2-3.

After completing his regression analysis, Mr. Chow concluded that small disadvantaged businesses (“SDBs”) not participating in the 8(a) program had 37 percent lower odds of winning a contract with the federal government compared to firms not identified as SDBs, even when all other identifiable reasons for success were held constant. *Id.* at 7. He found this difference to be

statistically significant. *Id.* He also found that minority-owned businesses (which include minority-owned small businesses, SDBs that are minority-owned, and minority-owned 8(a) participants) had roughly 15 percent lower odds of winning a federal contract than other small firms. *Id.* at 2. Again, Mr. Chow found that these disparities exist in federal government contracting despite having controlled for all other factors that might affect a firm's odds of success, as described above.

II. Defendants' Expert Discovery Productions

On February 24, 2022, Defendants produced two data files containing all the raw data used by Mr. Chow in his analysis, consistent with their expert disclosure obligations under Rule 26(a)(2)(B) of the Federal Rules of Civil Procedure. This included the data from SAM and the data on awards from FPDS. The SAM data set, which contains 7,466,447 observations and 42 variables, was contained in a file labeled "SAM_1904_2009_SB_D." *See* Ex. 3, May 17, 2022 Declaration of Daniel Chow ("Chow Decl.") ¶ 5. The FPDS awards data set, which contains 5,659,740 observations and 64 variables, was contained in a file labeled "Awards_Combined_FY19FY20_SBNonSB." *Id.* at ¶ 6. The latter file included a combination of two FPDS data sets that Mr. Chow had received from the SBA (one each for small and non-small businesses) and merged into a single file. Chow Rpt. at 3; Chow Decl. at ¶ 6.

On May 9, 2022, Defendants produced the Stata code used by Mr. Chow in performing his analysis. On May 17, 2022, Defendants produced an additional data file, labeled "FPDS_SAM_PPIRS_2019_2020_matching_Test4," consisting of Mr. Chow's merging of the two data sets already provided. Chow Decl. ¶ 7.

III. Plaintiff's Assumption Regarding the Data Utilized by Mr. Chow

On April 4, 2022, Defendants received the report prepared by Plaintiff's rebuttal expert,

Dr. Jonathan Guryan. In concluding that Mr. Chow’s analysis was “fundamentally flawed,” Dr. Guryan identified only one of the two data sets Mr. Chow relied upon: the file labeled “Awards_Combined_FY19FY20_SBNonSB.” Ex. 4, Report of Jonathan Guryan, Ph.D., at 27. This was because, as Plaintiff makes clear in the instant motion, Plaintiff assumed that this file contained a combination of FPDS and SAM data, and that this was the final “analysis” file used by Mr. Chow to run his regression analysis. Plaintiff’s Brief in Support of its Motion to Exclude Testimony of Defendants’ Expert Daniel Chow, Dkt. 58-1 (“Pl. Brief”), at 3-4. Plaintiff’s assumption was incorrect, as this file contains only FPDS awards data. Chow Decl. at ¶ 6.

Defendants took Dr. Guryan’s deposition on April 27, 2022, during which it became clear that Dr. Guryan’s analysis rested on this erroneous assumption about Mr. Chow’s data. After the deposition, Defendants took a number of steps to proactively address the issue and clear up any confusion.² Yet even after it became aware that portions of Dr. Guryan’s critique of Mr. Chow’s methodology rested on false assumptions, Plaintiff made no effort to retract or amend its rebuttal expert report. Instead, Plaintiff filed the instant motion.

ARGUMENT

I. Mr. Chow’s Report Satisfies the Requirements of Fed. R. Civ. P. 26(a)(2)(B)

Mr. Chow’s report includes a complete statement of the opinions he intends to express, the basis and reasons for them, and the facts or data he considered in forming those opinions.

² See Defendants’ Motion to Exclude the Testimony and Opinions of Plaintiff’s Expert Dr. Jonathan Guryan (Dkt. 59), at 23 n.13 (describing Defendants’ efforts, including confirming that Plaintiff and Dr. Guryan had received the two datasets; offering to confer with Plaintiff’s counsel by phone; producing an additional data file consisting of Mr. Chow’s merging of the two datasets already provided; and producing a declaration from Mr. Chow, clarifying the steps taken in his analysis).

Consequently, his report fully complies with the requirements of Fed. R. Civ. P. 26(a)(2)(B).³

Courts in this Circuit have made clear that “expert reports need not ‘replicate every word that the expert might say on the stand,’ but must only ‘convey the substance of the expert's opinion’” *Evans v. Cardinal Health*, No. 19-10751, 2020 WL 8459004, at *5 (E.D. Mich. Nov. 19, 2020) (citing *Metavante Corp. v. Emigrant Sav. Bank*, 619 F.3d 748, 762 (7th Cir. 2010)) (finding that although expert report “may not fully set forth all facts and data [expert] relied upon, it sufficiently conveys the substance of his opinions such that [opposing party] will not be unfairly surprised by his theories or opinions during trial,” and it therefore meets the requirements of FRCP 26(a)(2)(B)). To do so, it is sufficient for an expert to set forth the information relied upon and conclusions drawn therefrom. *Anderson v. Ridge Tool Co.*, No. 06-116-HRW, 2008 WL 3849923, at *3 (E.D. Ky. Aug. 14, 2008) (“Dr. Hahn's report, while brief, is sufficient to pass muster under Rule 26(a)(2). Dr. Hahn sets forth the information he used from the case, and provided his conclusions derived therefrom.”).

Indeed, contrary to the position advanced by Plaintiff, federal courts have consistently held that experts are not required to provide every scrap of paper, every intermediate dataset, and every calculation in order to comply with Rule 26(a)(2)(B). *See, e.g., Cook v. Rockwell Int'l Corp.*, 580 F. Supp. 2d 1071, 1121–22 (D. Colo. 2006) (denying motion for sanctions for failure to disclose expert’s detailed working notes, intermediate results and computer records, as these were not required disclosures per Rule 26(a)(2)); *Gillespie v. Sears, Roebuck & Co.*, 386 F.3d 21, 35 (1st Cir. 2004) (Rule 26(a)(b)(2) “does not require that the expert report contain, or be accompanied by, all working notes or recordings”); *Etherton v. Owners Ins. Co.*, No. 10-cv-00892-MSK-KLM,

³ Mr. Chow also provided his qualifications and other information required by FRCP 26(a)(2)(B)(iii)-(vi), which Plaintiff does not contest.

2011 WL 684592, at *2 (D. Colo. Feb. 18, 2011) (denying motion to strike expert report because defendant failed to produce five pages of calculations expert created when producing his report, as “Fed. R. Civ. P. 26(a)(2)(B) does not require the production of every scrap of paper with potential relevance to an expert’s opinion”); *Helmert v. Butterball, LLC*, No. 4:08-CV-00342 JLH, 2011 WL 3157180, at *2 (E.D. Ark. July 27, 2011) (citation omitted) (denying motion to compel production of expert’s data and calculations in electronic form, as “Rule 26(a)(2) does not require a party to disclose all of its expert’s notes, calculations, and preliminary analysis”); *Flebotte v. Dow Jones & Co.*, No. Civ. A. 97–30117–FHF, 2000 WL 35539238, at *7 (D. Mass. Dec. 6, 2000) (“[N]either the plain language of the rule nor its purpose compels disclosure of every calculation or test conducted by the expert during formation of the report.”). Courts have rejected the overly broad interpretation of Rule 26(a)(2)(B) that Plaintiff presses here. As one court explained,

Defendants assert Rule 26(a)(2) was violated, because, they argue, without the detailed working notes, intermediate results and computer records they requested, their rebuttal expert could not replicate all of Dr. Radke’s results when he reviewed and tested the methodology set forth in Dr. Radke’s expert report and other disclosures. Rule 26(a)(2)’s requirements that the expert’s report include his opinions and reasoning and “the data or other information considered by the witness in forming the opinions” do not, however, require that the expert report contain, or be accompanied by, all of the expert’s working notes or recordings. Nor is there any suggestion in Rule 26(a)(2) that an expert report is incomplete unless it contains sufficient information and detail for an opposing expert to replicate and verify in all respects both the method and results described in the report.

Cook, 580 F. Supp. 2d at 1121–22 (citing *Gillespie*, 386 F.3d at 35); *see also Tuk v. U.S. Xpress, Inc.*, No. 2:19-CV-134, 2021 WL 2433800, at *4–5 (S.D. Ga. June 15, 2021) (citations omitted) (“While Sloan did not provide every calculation he performed, Rule 26 does not require him to do so. Similarly, Rule 26(a)(2)(B) does not require a report recite each minute fact or piece of scientific information that might be elicited on direct examination to establish the admissibility of the expert opinion under *Daubert*.”); *Kleiman v. Wright*, No. 18-cv-80176, 2020 WL 6729362, at *7 (S.D. Fla. Nov. 16, 2020) (citations omitted) (“There is no suggestion in Rule 26(a)(2) that an

expert report is incomplete unless it contains sufficient information and detail for an opposing expert to replicate and verify in all respects both the method and results described in the report.”). Thus, that Dr. Guryan was purportedly unable to replicate Mr. Chow’s analysis without the benefit of every intermediate dataset or step-by-step instructions is not a reason to conclude that Mr. Chow failed to meet his obligations under Rule 26(a)(2)(B). Defendants were under no obligation to engage in hand-holding or perform Dr. Guryan’s analysis for him. Mr. Chow was required to describe his methodology and produce the data he relied upon, and he did so.

Moreover, based upon this caselaw, Defendants reasonably concluded that they were not required to produce the Stata code used by Mr. Chow in his analysis nor any of the many data sets resulting from any of the intermediate steps taken by Mr. Chow, as these were simply combined files generated from the original SAM and FPDS data that Defendants had already produced. 2nd Chow Decl. at ¶ 6.⁴ There is no single method to perform regression analysis, nor any single software program to analyze data, and Plaintiff could have chosen any number of methods to replicate Mr. Chow’s findings. *Id.* at ¶ 4. Nevertheless, Defendants voluntarily produced Mr. Chow’s code and the “analysis” file containing combined SAM and FPDS data to aid Plaintiff in its review of Mr. Chow’s report.

Plaintiff cites a single case to support its contention that Mr. Chow’s report fails to comply with Rule 26(a)(2)(B) and therefore must be excluded, and it is clearly distinguishable from the facts here. In *R.C. Olmstead, Inc. v. CU Interface, LLC*, 606 F.3d 262, 271 (6th Cir. 2010), the

⁴ From the two original data sets, Mr. Chow created approximately 41 additional data files that emerged as he combined files in various steps throughout the process. 2nd Chow Decl. at ¶ 6. In the course of doing so, Mr. Chow “collapsed” the data, which is simply a way of aggregating data using a command in Stata. *Id.* at ¶ 7. In order to perform a regression, such collapsing is implicitly necessary, as you need to be able to isolate a particular variable in order to get the outputs you are interested in, *e.g.*, to generate results for minority-owned businesses or women-owned businesses. *Id.*

expert submitted a two-page report with “only cursory support” for his conclusion, and “lack of reasoning” describing why any of the alleged similarities in a copyright infringement case indicated that copying had occurred. There, a party’s expert completely failed to show his work, offering only conclusory opinions. That is not the case here, as Mr. Chow has provided a detailed description of the data and methodology he used, the variables he controlled for, the ways in which he controlled for potential errors, and a discussion of his results. He also refers extensively to the prior Rubinovitz study—which analyzed similar data in a similar manner and achieved similar results—which was attached to his report and should be read in conjunction with it.⁵ In short, Mr. Chow showed his work.

Plaintiff’s position, which would require experts like Mr. Chow to specifically reference every one of the potentially numerous data sets created during their analysis from beginning to end, would distort the purpose of Rule 26(a)(2)(B) and significantly increase litigation costs. It finds no support in the caselaw and should be rejected.⁶

Finally, the context in which Plaintiff’s motion was filed is important. Plaintiff’s expert made an erroneous assumption about the data used in Mr. Chow’s analysis. One of the data files produced to Plaintiff included “SAM” in the title, and the other referred to “Awards Combined.” It is not clear why Dr. Guryan would assume that Defendants would provide him with the original

⁵ It bears noting that Mr. Chow was able to successfully model (rather than replicate, as he was using different data) the study completed by another expert, Dr. Rubinovitz, using Dr. Rubinovitz’s written report as a guide.

⁶ Although Defendants contend that Mr. Chow’s report meets the disclosure requirements of Rule 26(a)(2)(B), even if the Court were to find that Mr. Chow’s disclosures were deficient, any such failure was substantially justified (based on Defendants’ reasonable interpretation of the caselaw) and/or harmless (as Defendants have disclosed the data requested by Plaintiff), and does not warrant exclusion of Mr. Chow’s testimony. *See* Fed. R. Civ. P. 37(c)(1).

SAM data and the combined SAM and FPDS awards data, but not the original FPDS awards data.⁷ Moreover, it strains credulity to think that Dr. Guryan actually believed that a data set in which every firm had been awarded a contract could possibly have been used to generate the odds ratios in Mr. Chow's report. In order to generate odds ratios, each observation in the data set must be awarded a "1" or "0", corresponding with whether the event in question (here, being awarded a federal contract) has occurred or not. 2nd Chow Decl. ¶ 5. It is therefore unclear why Dr. Guryan would review a single dataset in which it appeared that every business had won a contract (*e.g.*, in which they had all been assigned a "1") and conclude that Mr. Chow could not possibly have calculated the odds ratios that were included in the report, rather than conclude that perhaps he was not looking at all of the relevant data.

Nevertheless, after Defendants became aware of the confusion and promptly took steps to correct it, Plaintiff took no action. Rather than attempt to correct an obvious misunderstanding and seek to amend their report, Plaintiff simply bided its time until it could file the instant motion. In doing so, Plaintiff clearly hopes to avoid confronting the substance of Mr. Chow's analysis, given that it significantly undermines Plaintiff's case. Indeed, Plaintiff's pending motion for summary judgment makes no mention of Mr. Chow's report at all. Plaintiff should not be permitted to avoid having to engage with Mr. Chow's report when it was provided with every opportunity to do so.

⁷ Plaintiff makes much of the fact that Mr. Chow mistakenly agreed during his deposition that a data set containing approximately 5.6 million observations and 64 variables included merged SAM and FPDS data, an error that Mr. Chow has corrected. Although Plaintiff is dismissive of Mr. Chow's assertion that he could not recall the exact details of each of the many data sets used during his analysis from memory because his expert report was available during his deposition, this does nothing to ameliorate the fact that Mr. Chow did not have access to the numerous data sets themselves. These data sets, to the extent they were not supplanted by subsequent functions in Stata, are maintained in Stata, which neither Mr. Rosman nor Mr. Chow accessed during Mr. Chow's deposition. As Mr. Chow has attested, he did not commit the exact details of those data sets to memory, and it is not reasonable to expect him to have done so. Chow Decl. ¶ 10.

II. Mr. Chow's Report is Admissible Expert Testimony Pursuant to Fed. R. Evid. 702

a. Mr. Chow's Report is both Reliable and Relevant

Mr. Chow's report more than meets the standard for admissible expert testimony under Fed. R. Evid. 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), as his report is both reliable and relevant.

"The first prong of the *Daubert* examination, reliability, requires the Court to assess carefully the methodology, reasoning, or technique employed by the expert." *Wynacht v. Beckman Instruments, Inc.*, 113 F. Supp. 2d 1205, 1207 (E.D. Tenn. 2000) (citing *Pride v. BIC Corp.*, 218 F.3d 566, 577 (6th Cir. 2000) and *United States v. Smithers*, 212 F.3d 306, 313 (6th Cir. 2000)). The factors relevant in evaluating the reliability of the testimony include "whether a method is testable, whether it has been subjected to peer review, the rate of error associated with the methodology, and whether the method is generally accepted within the scientific community." *Coffey v. Dowley Mfg., Inc.*, 187 F. Supp. 2d 958, 970 (M.D. Tenn. 2002) (citing *Daubert*, 509 U.S. at 593-94). Although each of these factors need not be met in every case for an expert's report to be admissible, Mr. Chow's analysis meets each of them.

Mr. Chow used a testable method (logistic regressions) to determine whether firms that were SDBs or minority-owned businesses were more or less likely to win federal prime contracts relative to other small businesses, holding constant various factors that might influence the award of a contract. Chow Rpt. at 1-2. Mr. Chow testified that he controlled for as many factors as the data allowed. Ex. 5, Deposition of Daniel Chow ("Chow Dep.") at 110:12-20. Regression analysis, including logit regression, is a statistical methodology that is well-regarded and accepted within the scientific community. Ex. 6, Deposition of Jonathan Guryan ("Guryan Dep.") at 100:7-101:19 ("regression analysis is a valuable and powerful tool . . ."). Although Dr. Guryan is critical of the

use of regression analysis to test for discrimination, he concedes that it is commonly used by economists to document disparities. Guryan Dep. at 101:20-102:15. Moreover, courts have long accepted regression analysis as evidence of discrimination. *See, e.g., O'Donnell v. City of Cleveland*, 838 F.3d 718, 727-28 (6th Cir. 2016) (citing *Bazemore v. Friday*, 478 U.S. 385, 400-01 (1986)) (explaining the probative value of regression analyses in Title VII discrimination cases); *Rothe Dev., Inc. v. Dep't of Def.*, 107 F. Supp. 3d 183, 208 (D.D.C. 2012) (citing Rubinovitz study in upholding the constitutionality of the 8(a) Business Development Program at issue in this case). Plaintiff would therefore be hard-pressed to advance an argument that Mr. Chow's methodology constitutes "misleading junk science." Pl. Brief at 10 (citing *Best v. Lowe's Home Ctrs., Inc.*, 563 F.3d 171, 176-77 (6th Cir. 2009)).

Moreover, Mr. Chow's analysis includes many markers of reliability. It includes standard errors, which Mr. Chow determined were small relative to their estimated odds ratios. Chow Rpt. at 7. He also tested his results for statistical significance, and determined that SDBs had a statistically significantly lower chance of winning a contract in over 93% of contract actions. *Id.* at 10 (see Table 4). Finally, Mr. Chow's report was peer reviewed by Dr. Elizabeth Perlman, an economist at the U.S. Census Bureau's Center for Economic Studies, and she concluded that Mr. Chow's methodology and statistical analysis were sound. Chow Decl. ¶ 11.

Although Plaintiff appears to attack only the reliability of Mr. Chow's analysis, not its relevance, his expert report and testimony are plainly relevant as well. Plaintiff has brought a constitutional challenge to the SBA's Section 8(a) Business Development Program, including the SBA regulation that confers a rebuttable presumption of social disadvantage on members of certain minority groups. To defend against such a challenge, Defendants are required to show that the government had "a strong basis in evidence" to conclude that race-based action was necessary to

further the government's compelling interest in remedying discrimination that has impeded the ability of minority business enterprises to compete equally in the marketplace. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 500 (1989). Mr. Chow's report and testimony document disparities in federal government contracting faced by SDBs (the vast majority of which are minority-owned) and minority-owned businesses, which, after accounting for numerous non-discriminatory factors that could have affected the outcome, Mr. Chow has concluded are consistent with the existence of discrimination. This evidence is part of the voluminous record demonstrating that the government is at the very least a passive participant in a discriminatory marketplace, and continues to have a strong basis in evidence to conclude that discrimination and its lingering effects have impeded the ability of minority-owned businesses to compete in public contracting, including federal government contracting.

b. Plaintiff's Speculation that Mr. Chow's Decision Not to Control for a Particular Variable May Have Biased the Results is Not a Reason to Exclude His Testimony

Plaintiff's contention that Mr. Chow's methodology is flawed because he did not control for the effects of a business's bidding behavior is purely speculative. Even if it were not, well-established case law makes clear that an expert's failure to control for a particular variable in a regression is not a basis to exclude their testimony.

Although Plaintiff contends that bidding data is a "vitally important variable" and its omission from Mr. Chow's analysis is a fatal flaw, Plaintiff has no basis to believe that this is true. Plaintiff offers no evidence that businesses owned by individuals of different races bid at measurably different rates, and Dr. Guryan testified that he was not aware of any such evidence. Guryan Dep. at 219:11-17. As Dr. Guryan explained at his deposition, if there are no differences in a particular variable among the groups being studied, then failing to control for it will not bias

the results. Guryan Dep. at 86:9-88:6. Moreover, Dr. Guryan did not conduct any testing to determine whether including bidding behavior would have changed Mr. Chow's results. Consequently, this critique is purely speculative. Using Plaintiff's logic, Ultima could have pointed to *any* non-discriminatory factor that Mr. Chow failed to control for—such as where the business name might fall in an alphabetical list—and asserted that such factor could have altered the results. But without evidence that the omission of a particular variable actually would have made a difference, such speculative critiques are meaningless.

Mr. Chow controlled for every variable that the datasets he was working with allowed for. The data available to Mr. Chow did not include any information about bidding. 2nd Chow Decl. ¶ 8. Although Mr. Chow confirmed in his deposition that he did not control for businesses' bidding behavior in his analysis, he also testified that he was not aware of any evidence that minority-owned firms bid less often on contracts than non-minority-owned firms. Chow Dep. at 112:9-15. Thus, he had no reason to believe that including this information would have changed his results.

Crucially, even if Plaintiff had provided evidence that the omission of bidding behavior could have biased Mr. Chow's results, this would not be a basis to exclude Mr. Chow's report and testimony. The Supreme Court has made clear that the omission of a variable from a regression analysis goes to the weight of the evidence, not its admissibility:

While the omission of variables from a regression analysis may render the analysis less probative than it otherwise might be, it can hardly be said, absent some other infirmity, that an analysis which accounts for the major factors must be considered unacceptable as evidence of discrimination. Normally, **failure to include variables will affect the analysis' probativeness, not its admissibility.**

Bazemore, 478 U.S. at 400 (Brennan, J., concurring) (emphasis added). Although this opinion predates *Daubert*, its holding was reaffirmed by the Sixth Circuit in a post-*Daubert* decision. *See Conwood Co., L.P. v. U.S. Tobacco Co.*, 290 F.3d 768, 794 (6th Cir. 2002) (citing *Bazemore*, 478

U.S. at 400) (finding district court did not abuse its discretion in allowing expert to testify despite opposing party's complaint that his regression analysis omitted other variables that could have explained the results, as the expert had "ruled out all plausible alternatives for which he had data"). Plaintiff's assertion that Mr. Chow's regression analysis did not include every variable that Plaintiff considers relevant fails to address this well-established, controlling case law.

c. Plaintiff's Contention that Mr. Chow Should Have Separated Out Individual Minority Groups is Not a Reason to Exclude His Testimony

Plaintiff's contention that Mr. Chow's report must be excluded because he did not separate out individual minority groups in his analyses similarly finds no support in the case law. Quite simply, this is not a critique of Mr. Chow's methodology and has nothing to do with Fed. R. Evid. 702. Indeed, Plaintiff has not cited a single case interpreting Rule 702 or *Daubert* that supports its position that this alleged flaw warrants exclusion. While such a contention may have been relevant to Plaintiff's motion for summary judgment (in which Plaintiff does not mention Mr. Chow's report), it has no place in a *Daubert* motion.

Nevertheless, Defendants maintain that Mr. Chow's decision not to disaggregate the data by individual racial groups was methodologically sound. As a practical matter, it may not have been possible for Mr. Chow to disaggregate the results by racial groups with the data he was given. As Table 1 of Mr. Chow's report demonstrates, 4.3% of SDBs were owned by minorities that were "not classified" into a particular group, and the minorities represented in the data may belong to more than one racial or ethnic group. Chow Rpt. at 4. Furthermore, if Mr. Chow had attempted to disaggregate the results by individual racial groups, there would have been significantly fewer results in each industry (defined in Mr. Chow's analysis by three-digit NAICS codes), leaving him with insufficient data from which to draw any conclusions. 2nd Chow Decl. ¶ 9. Just as Mr. Chow explained in his report that using three-digit NAICS codes represented a "compromise" in order

to have sufficient data in each industry grouping, Chow Rpt. at 3 n.9, aggregating minority groups represented a similar compromise, and it does not diminish the fact that disparities were identified for minority-owned businesses overall and that such disparities could not adequately be explained by non-discriminatory factors.

CONCLUSION

The expert report and testimony prepared by Daniel Chow satisfy the requirements of Fed. R. Civ. P. 26(a)(2)(B) and Fed. R. Evid. 702. None of Plaintiff's arguments for exclusion have merit, nor are they supported by the caselaw. For these reasons, Defendants respectfully request that Plaintiff's Motion to Exclude the Testimony of Defendants' Expert Daniel Chow be denied.

Dated: July 5, 2022

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on July 5, 2022, I electronically filed the above document and with the Clerk of the Court using the ECF System, which will send notification of such filing to all counsel of record.

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